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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,593	11/24/2003	Helmut Schwarz	P24519	1224
7055	7590	07/05/2005	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C.			MITCHELL, KATHERINE W	
1950 ROLAND CLARKE PLACE			ART UNIT	
RESTON, VA 20191			PAPER NUMBER	
			3677	

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/718,593	SCHWARZ ET AL.	
	Examiner	Art Unit	
	Katherine W. Mitchell	3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☒ Claim(s) ~~20-30 and 40~~ is/are objected to. *keep*
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/24/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 46-49 is found persuasive because the method is inherent in the structure, and the same structure is required for the method, and thus the searches overlap. All claims are being examined.

Drawings

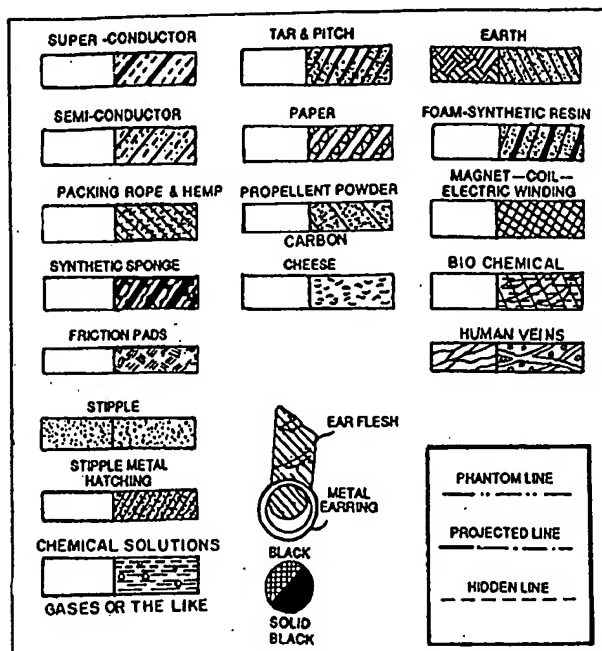
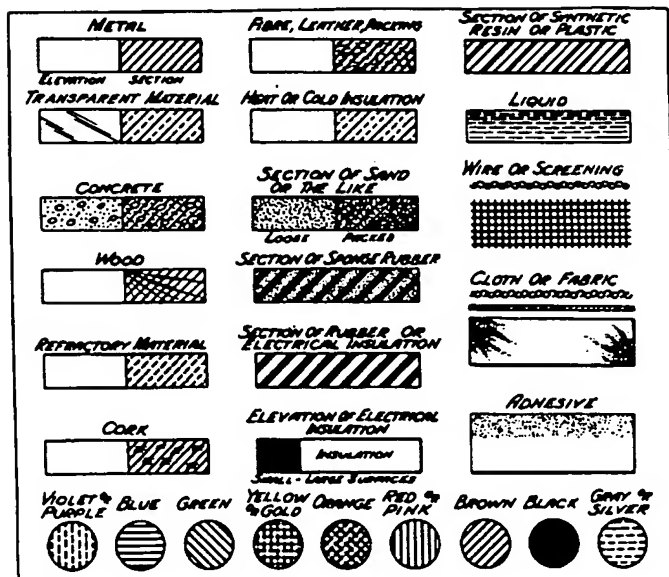
2. The drawings are objected to because the hatching in Figs 1 and 3 is improper.

DRAWING SYMBOLS

37 CFR 1.84(n) indicates that graphic drawing symbols and other labeled representations may be used for conventional elements where appropriate, subject to approval by the Office. Also, suitable legends may be used, or may be required, in proper cases. For examples of suitable symbols and legends, see the "Guide for the Preparation of Patent Drawings" available from the USPTO web site at www.uspto.gov....

The following symbols should be used to indicate various materials where the material is an important feature of the invention. The use of conventional features is very helpful in making prior art searches.

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Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an

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amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1- 50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1- 50 include "shell-shaped" threaded nut segments. "Shell-shaped" is unclear - shells come in numerous shapes, including various sea shells, pastry shells, snail shells, bullet casing shells, etc. Appropriate correction is required.

shell (shěł) noun

1. *a. The usually hard outer covering that encases certain organisms, such as mollusks, insects, and turtles; the carapace. b. A similar outer covering on an egg, a fruit, or a nut. c. The material that constitutes such a covering.*

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2. *Something resembling or having the form of a shell, especially: a. An external, usually hard, protective or enclosing case or cover. b. A framework or an exterior, as of a building. c. A thin layer of pastry. d. The external part of the ear.*
3. *Nautical. a. The hull of a ship. b. A long, narrow racing boat propelled by rowers.*
4. *A small glass for beer.*
5. *a. A projectile or piece of ammunition, especially the hollow tube containing explosives used to propel such a projectile. b. A metal or cardboard case containing the charge, primer, and shot fired from a shotgun.*
7. *Physics. a. Any of the set of hypothetical spherical surfaces centered on the nucleus of an atom that contain the orbitals of electrons having the same principal quantum number. b. An analogous pattern of protons and neutrons within a nucleus.*
8. *a. A usually sleeveless and collarless, typically knit, blouse. b. The outermost layer of a lined garment such as a coat or jacket: a parka with a waterproof shell.¹*

Further, independent claim 50 recites “the at least two shell-shaped members” in line 13. There is insufficient antecedent basis for this limitation in the claim, as the members have been disclosed as only nut segments.

In all cases, examiner has assumed “shell-shaped” to mean concavely curved forming an arc about a longitudinal axis as shown in the Figures.

Claim Objections

5. Claim 13 is objected to because of the following informalities: The Markush group is awkward. The opening is configured to perform at least one function including.... Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-27,31-41,43-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuta USP 5902085 in view of Schwartz DE 29920495.

Re claims 1-2, 31,32, 46-50: Yuta teaches a connection arrangement for detachably connecting first and second components together (Fig 1, 12, abstract, col 5 lines 46-col 6 line 23) comprising:

A retaining bolt (30)

a connector (1) comprising a tapered housing (see Fig 12) with an opening capable of receiving the bolt and internal taper and internal segments, with a mechanism (7) to bias the segments toward the housing opening

the segments are at least 2 shell-shaped nut segments (Fig 1, #9) adapted to threadingly engage a threaded bolt. They form partial thread sections.

However, it is not clear that there is a vibration damping member, wherein the connector is mounted to the damping member, but the assembly is plastic which is somewhat naturally vibration damping, but this would not be a separate member.

Schwartz teaches a connection arrangement wherein the connector housing the internal threads is mounted to a vibration damping member (1) in the abstract and Figures.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Yuta and Schwartz before him at the time the invention was made, to modify Yuta as taught by Schwartz to include a vibration damping member mounted to the connection element, in order to obtain reduce vibrations. One would have been motivated to make such a combination because reduced vibrations would result in less wear, longer life, and quieter connections.

Re claims 46-49: The method is inherent in the structure, as shown in Yuta Fig 12. Tapered threads on a nut surface and bolt inevitably have a clockwise and counterclockwise direction to screw in or out, which due to the taper would result in having the segments get closer or farther apart.

Re claims 2; Yuta Fig 12 shows the detachable connection when components 1 and 2 (26,27) have aligned openings.

Re claim 3: Yuta Fig 1 shows the shell shaped segments having a beveled form.

Re claim 4: Yuta's abstract teaches the nut segments moving toward and away from the opening.

Re claims 5,10,11,12,43,44,45: Yuta teaches a spring (7) as the biasing means, which is located in the housing. The annular member 6 is a disc which indirectly contacts the segments via contact with an intermediate member (spring 7), and it moves axially per Fig 12 toward/away from the housing floor 17.

Re claims 6-7,40,: The split nature of Yuta's nut segments inevitably allows the bolt to move thru the segments without rotating, and the bolt will engage the threads of the segments when the bolt is rotated, per col 5 lines 46-col 6 line 23. The nut segments are shown as spaced apart from each other in Fig 1.

Re claims 8-9,41: Springs 7 also serve as stops in the housing which serve to separate the segments.

Re claims 13-15,33: The floor and annular member both contain openings for receiving the bolt. The housing floor comprises an outward circumferential flange 17 adapted to be attached to the second component per Fig 12.

Re claims 16-22,34,36: Schwartz has the connector within and surrounded by the vibration damping member, which is an elastomeric ring as described, and the ring or hollow cylinder can be mounted to the opening of the second component.

Re claim 23-24,37,38: Schwartz teaches the vibration damping material/coating anti slip material/coating, which are inevitable properties of elastomeric materials.

Re claims 25,35: Schwartz teaches an outer hollow cylinder 3.

Re claim 26-27,39: Yuta's sloped surface (21) in Fig 12 serves as a beveled centering ring.

9. Claims 1-27,31-41,43-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Childers USP 4974888 in view of Schwartz.

Re claims 1-2, 31,32, 46-50: Childers teaches a connection arrangement for detachably connecting first and second components together (Fig 1, 3a, 3b, abstract,) comprising:

A retaining bolt (70)

a connector (90) comprising a tapered housing (see Fig 1) with an opening capable of receiving the bolt and internal taper and internal nut segments 120, with a mechanism (149) to bias the segments toward the housing opening

the segments are at least 2 (121 is individual segment, there are 3) shell-shaped nut segments (Fig 1,) adapted to threadingly engage a threaded bolt. They form partial thread sections.

However, it is not clear that there is a vibration damping member, wherein the connector is mounted to the damping member, but the assembly is plastic which is somewhat naturally vibration damping, but this would not be a separate member.

Schwartz teaches a connection arrangement wherein the connector housing the internal threads is mounted to a vibration damping member (1) in the abstract and Figures.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Childers and Schwartz before him at the time the invention was made, to modify Childers as taught by Schwartz to include a vibration damping member mounted to the connection element, in order to obtain reduce vibrations. One would have been motivated to make such a combination because reduced vibrations would result in less wear, longer life, and quieter connections.

Re claims 46-49: The method is inherent in the structure, as shown in Childers Figs 1 -4 and col 5 line 41-col 7 line 23. Tapered threads on a nut surface and bolt

inevitably have a clockwise and counterclockwise direction to screw in or out, which due to the taper would result in having the segments get closer or farther apart.

Re claim 2: Childers shows the detachable connection when components 1 and 2 are aligned - one of the openings is formed in a bracket attached to the 1st component.

Re claim 3: Childers shows the shell shaped segments having a beveled form - Fig 1.

Re claim 4: Childers abstract teaches the nut segments moving toward and away from the opening.

Re claims 5,10,11,12,43,44,45: Childers teaches a spring (149) as the biasing means, which is located in the housing. The annular member 142/146 is a disc which indirectly contacts the segments via contact with an intermediate member (spring), and it moves axially per Fig 1 toward/away from the housing floor (at 92).

Re claims 6-7,40,: The split nature of Childer's nut segments inevitably allows the bolt to move thru the segments without rotating, and the bolt will engage the threads of the segments when the bolt is rotated. The nut segments are shown as spaced apart from each other in Fig 1.

Re claims 8-9,41,42: Childers shows stops 115 in the housing which serve to separate the segments and prevent rotation.

Re claims 13-15,33: The floor and annular member both contain openings for receiving the bolt. The housing floor comprises an outward circumferential flange 92 adapted to be attached to the second component per Fig 1.

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Re claims 16-22,34,36: Schwartz has the connector within and surrounded by the vibration damping member, which is an elastomeric ring as described, and the ring or hollow cylinder can be mounted to the opening of the second component.

Re claim 23-24,37,38: Schwartz teaches the vibration damping material/coating anti slip material/coating, which are inevitable properties of elastomeric materials.

Re claims 25,35: Schwartz teaches an outer hollow cylinder 3.

Re claim 26-28,39: Childer's sloped surface (114) in Fig 1 serves as a beveled centering ring. A guide sleeve is at 116 which is capable of resting against a component.

Allowable Subject Matter

10. Claim 30 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 571-272-7069. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Katherine W Mitchell
Examiner
Art Unit 3677

Kwm
6/17/2005

A handwritten signature in black ink, appearing to read "Katherine W Mitchell", written in a cursive style.